

## ABSTRACT

The present invention provides a method of analyzing multiple samples simultaneously by absorption detection. The method comprises:

- (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species,
- (ii) irradiating the planar array of multiple containers with a light source comprising or consisting essentially of at least one wavelength of light that is absorbed by one or more of the absorbing species, the absorption of which is to be detected, and
- (iii) detecting absorption of light by one or more of the absorbing species with a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance of at least about 10 times a cross-sectional distance of a container in the planar array of multiple containers measured orthogonally to the plane of the planar array of multiple containers. The detection of absorption of light by a sample in the planar array of multiple containers indicates the presence of an absorbing species in the sample. The method can further comprise:

- (iv) measuring the amount of absorption of light detected in (iii) for an absorbing species in a sample. The measurement of the amount of absorption of light detected in (iii) indicates the amount of the absorbing species in the sample.

Also provided by the present invention is a system for use in the above method. The system comprises:

- (i) a light source comprising or consisting essentially of at least one wavelength of light that is absorbed by one or more absorbing species, the absorption of which is to be detected,
- (ii) a planar array of multiple containers, into each of which can be placed a sample comprising at least one absorbing species, and
- (iii) a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance of at least about 10 times a cross-sectional distance of a container in the planar array of multiple containers measured orthogonally to the plane of the planar array of multiple containers.